

# Seminar 3

Object-Oriented Design, IV1350

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# 1 Introduction

This seminar is related to writing a code for the previous seminars 1 and 2. The first seminar we created a domain model and a system sequence diagram for the point of sale. The second seminar we created a design under development. This seminar we will to create a java program for this point of sale and then we will write a test for this system. I work for this program with my collage Tommy Hanna.

## 2 Method

I started off by following the instructions in the course book. First, I following the class diagram that I created in seminar 2 to code my program.

Then I relies that I want to add thigs that weren't in seminar 2 and there is a lot of un necessary classes that I don't want so I stopped following the diagram. I started by create five packages Startup, view, controller, integration, model.

In each of these packages there is at least one class. In the classes I wrote all the methods that I needed to complete my program. After that I started by writing all comments that program needs. in the end I wrote two tests of my program.

### 3 Result

The program starting with main function with started a new sale. The cashier starts with scans all items that the customer has purchased. All items that the customer shop displays in the screen with there information's, including total price with vat, total with discount, change and the amount the customer has to pay. At the end the print pints the receipt, see figures 3.1

```
Cashier starts new sale
Cashier enter items:
1  Item: Chips   VAT: 0.01   quantity: 1   Price: 20.0
2  Item: Sallad  VAT: 0.01   quantity: 1   Price: 10.0
3  Item: Candy   VAT: 0.01   quantity: 1   Price: 5.0
4  Item: Cola    VAT: 0.01   quantity: 1   Price: 5.0
5  Item: Juce    VAT: 0.01   quantity: 1   Price: 5.0

Receipt : Sale time: 2022-05-03
Store Name: Hem affär
Items :
ID: 1   Name: Chips   Quantity: 1   VAT: 0.01   Price With Vat: 20.0
ID: 2   Name: Sallad  Quantity: 1   VAT: 0.01   Price With Vat: 10.0
ID: 3   Name: Candy   Quantity: 1   VAT: 0.01   Price With Vat: 5.0
ID: 4   Name: Cola    Quantity: 1   VAT: 0.01   Price With Vat: 5.0
ID: 5   Name: Juce    Quantity: 1   VAT: 0.01   Price With Vat: 5.0

total price: 45.900000000000006
Discount: 4.545000000000001
Change With Price After Discount: 40.905
Price to pay: 40.905
-----END-----
```

<https://github.com/Nariman-Haidar/IV1350-Seminar3>

## 4 Discussion:

I think that my code is easy to understand. I tried to make my code easy to understand and easy to read. I tried to give the methods and variables a good name which makes them easy to understand. Some times I wrote names a little long.

I don't think that there is any duplicated code and I don't have any so long methods or classes in my program. All the classes that I used I needed all of them. I used objects. I used the primitive data to represent price, discount, total and description. I think there is low coupling, high cohesion and good encapsulation.

I wrote two tests and I thought tests were difficult to write and it took a lot of time to write it but at the end I understand it. I think that tests are very important.